

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 55/MP/2018**

**Coram:  
Shri P.K. Pujari, Chairperson  
Shri A.K. Singhal, Member  
Dr. M.K. Iyer, Member**

**Date of Order: 28<sup>th</sup> of August, 2018**

**In the matter of**

Submission under sub-section (4) of Section 28 of Electricity Act, 2003 read with Regulation 6 and Regulation 29 of Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015 for approval of Performance Linked Incentive for ERLDC for the financial year 2016-17 for the control period 1.4.2014 to 31.3.2019.

**And  
In the matter of**

Eastern Regional Load Despatch Centre  
14, Golf Club Road, Tollygunge,  
Kolkata-33

**...Petitioner**

**Vs.**

- 1) The Chairman  
Bihar State Power Holding Co. Ltd.  
Vidyut Bhavan, Bailey Road  
Patna-800021
- 2) The Chairman  
Jharkhand Urja Vikash Nigam Limited  
Dhurwa Road, Ranchi  
Jharkhand-834002
- 3) The Chairman  
Damodar Valley Corporation  
DVC Tower, VIP Road, Kolkata  
West Bengal-700054
- 4) The Chairman  
Grid Corporation of India Limited



Janpath, Bhubaneswar  
Odisha-751022

- 5) The Secretary  
Power Department, Govt. of Sikkim  
Kaji Road, Sikkim  
Gangtok-731101
- 6) The Chairman  
West Bengal State Electricity Distribution Corporation Limited  
Bidyut Bhavan, Saltlake, Kolkata  
West Bengal-700091
- 7) The Executive Director, ERTS-I  
Power Grid Corporation Limited  
Board Colony, Shastri Nagar  
Patna-800023
- 8) The Additional General Manager  
NTPC Vidyut Vyapar Nigam Limited  
Lodhi Road, New Delhi-110003
- 9) The General Manager  
Farakka Super Thermal Power Plant-I&II  
NTPC Limited  
Farakka, West Bengal-742236
- 10) The General Manager  
Kahalgaoon Super Thermal Power Plant-I  
NTPC Limited  
Bhagalpur  
Bihar-813214
- 11) The General Manager  
Kahalgaoon Super Thermal Power Plant-II  
NTPC Limited  
Bhagalpur  
Bihar-813214
- 12) The Executive Director  
Talcher Super Thermal Power Stn-I  
NTPC Limited  
Nayapalli, Odisha-751012
- 13) The Chief Engineer (Elect)  
Teesta V HEP, NHPC



Singtam, East Sikkim-737134

- 14) The Chief Engineer  
Rangit Hydro Electric Project, NHPC  
P.O. Rangit Nagar  
South Sikkim-737111
- 15) The Chairman  
Damodar Valley Corporation  
DVC Tower, VIP Road, West Bengal  
Kolkata-700054
- 16) The General Manager  
Farakka Super Thermal Power Plant-III  
NTPC Limited  
Farakka, West Bengal-742236
- 17) The Plant Head  
Vedanta Limited  
IPP Administrative Building  
Orissa Village-Bhurkhamunda  
Jharsuguda-768202
- 18) The CEO  
Maithon Power Limited  
MA-5, Gogna Colony  
P.O. Maithon, Dhanbad  
Jharkhand-828027
- 19) The Additional General Manager  
National Thermal Power Corporation Limited  
BARH Thermal Power Station  
Patna, Bihar-803213
- 20) The President & Director-Projects  
Gati Infrastructure Pvt. Ltd.  
268, Udyog Vihar, Phase-IV  
Gurgaon, Haryana-122001
- 21) The DGM (Electrical)  
Adhunik Power & Natural Resources Limited  
Village: Padampur  
PS Kandra, Tata-Seraikela Road  
Jharkhand-832105
- 22) The Additional General Manger (Commercial)



Talcher Solar PV, ER-II Headquarters  
NTPC Limited  
3<sup>rd</sup> Floor, OLIC Building  
Plot No. N-17/2, Nayapalli, Odissa  
Bhubaneswar-751012

23)The General Manager (Power Sales & Regulatory)  
GMR Kamalanga Energy Limited  
Plot No. 29, Satyanagar, Bhubaneswar  
Orissa-751007

24)The Head Power & Sales  
Jindal India Thermal Power Limited  
Plot No. 12, Local Shopping Complex  
Sector-B1, Vasant Kunj  
New Delhi-110070

25)The Chief Engineer (PTR)  
WBSEDCL, Power Trading & Regulatory Cell  
Bidyut Bhavan, Block-A, Sector-II  
Saltlake, Kolkata  
West Bengal-700091

26)The Advisor (Power)  
Ind-Barath Energy Utkal Limited  
Sahajbahal, PO-Cgarpali Barpali  
Dist. Jharsuguda  
Odisha-768211

27)The Head Commercial  
Tata Power Trading Co. Ltd  
C-43, Sec-62, UP, Noida-201307

28)The Sr. General Manager (PP)  
Grid Corporation of India Limited  
Janpath, Bhubaneswar, Orissa-751022

29)The AGM  
DANS Energy Pvt. Ltd.  
5<sup>th</sup> Floor, DLF Buildig No. 8  
Tower C, DLF Cyber City, Phase-II  
Gurgaon-122002, Haryana

30)The General Manager (O&M)  
Bharatiya Rail Bijlee Company Ltd  
Nabinagar, Khera Police Station



Dist. Aurangabad, Bihar-824303

- 31)The Sr. Vice President (O&M)  
Teesta Urja Limited (Teesta-III HEP)  
Vijaya Building, 2<sup>nd</sup> Floor  
17, Barakhamba Road, New Delhi-110001
- 32)The Chairman  
North Interconnection Company Limited  
C-2, Mathura Road  
New Delhi-110065
- 33)The Executive Director, ER-I  
Power Grid Corporation (I) Ltd.  
Board Colony, Shastri Nagar  
Patna-800023
- 34)The General Manager  
Powerlinks Transmission Limited  
Vidyut Nagar, Siliguri, West Bengal-734015
- 35) The Head-Asset Management/O&M  
Purulia and Kharagpur Transmission Comp. Ltd.  
634 A-Tulip New Minal Residency  
J.K. Road Near Ayodhya Bypass Road  
Bhopal-462023
- 36) Senior Vice President  
Teestavalley Power Transmission Ltd.  
Vijaya Building, 2<sup>nd</sup> Floor  
17, Barakhamba Road, New Delhi-110001

**Respondents**

**Parties Present:**

Shri Manas Das, ERLDC  
Shri Nadeem Ahmed, ERLDC

**ORDERS**

The Petitioner, Eastern Regional Load Despatch Centre (ERLDC), has filed the present petition under Section 28 (4) of Electricity Act, 2003 read with Regulations 6 and 29 of Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015 (hereinafter



referred to as “Fees and Charges Regulations”) for approval of Performance Linked Incentive (PLI) for ERLDC for the financial year 2016-17 for the control period 1.4.2014. to 31.3.2019.

2. Brief facts of the case leading to the filing of the petition and subsequent developments after the filing of the petition are capitulated as under:

(a) Eastern Regional Load Despatch Centre setup under Section 27 of the Electricity Act, 2003 performs functions specified in Section 28 of the Electricity Act, 2003 (hereinafter referred to as the ‘Act’ ). NLDC and RLDCs are operated by Power System Operation Corporation Limited (POSOCO) in accordance with Government of India, Ministry of Power`s notification dated 27.9.2010.

(b) As per Regulation 29 (1) to 29 (3) of the Fees and Charges Regulations, the recovery of performance linked incentive by NLDC and RLDCs shall be based on the achievement of Key Performance Indicators (KPI) as specified in Appendix V of the Fees and Charges Regulations or other such parameters as specified by the Commission.

(c) As per Regulation 29 (6) of the Fees and Charges Regulations, RLDCs or NLDC are required to compute the KPIs on annual basis for the previous year ending 31<sup>st</sup> March and to submit the Commission for approval as per Appendix V and VI of the Fees and Charges Regulations.



(d) As per methodology specified in Appendix V of the Fees and Charges Regulations, KPI score for ERLDC for the year 2016-17 has been computed as under:

Sl. No	Key Performance Indicators	Weightage	Previous Year (as allowed by CERC (2015-16))	Current Year (2016-17)
1	Reporting of Interconnection meter error	10	10	10.00
2	Reporting of Grid Incidents and Grid Disturbance	10	10	10.00
3	Average processing time of shut down request	10	10	10.00
4	Availability of SCADA System	10	10	10.00
5	Voltage Deviation Index (VDI)	10	0	10.00
6	Frequency Deviation Index (FDI)	10	10	10.00
7	Reporting of System Reliability	10	7.78	10.00
8	Availability of Website	10	10	10.00
9	Availability of Standby Supply	5	5	5.00
10	Variance of Capital expenditure	5	5	3.83
11	Variance of Non Capital expenditure	5	5	5.00
12	Percentage of Certified Employee	5	5	5.00
	<b>Total</b>	<b>100</b>	<b>87.78</b>	<b>98.83</b>

(e) As per the methodology provided in Regulation 29 (5) of Fees and Charges Regulations, the Petitioner is entitled to recover 7% of annual charges for aggregate performance level of 85% for three years commencing from 1.4.2014 and the incentive shall increase by 1% of annual charges for every 5% increase of performance level above 90%. Accordingly, recovery of Performance Linked Incentive for the year 2016-17 works out as 8.765% of the annual charges (For 90-95% additional 1% and for 95% to 97.78% additional 0.556%).



3. Against the above background, the Petitioner has filed the present petition with the following prayers:

“(a) Approve the proposed performance linked incentive based on the KPIs computed by ERLDC for the year ending 31.03.2017 given at para 5, the KPI score given at para 6 and PLI percentage of Annual Charges of the year 2016-17 as per para 7 above.

(b) Allow the Applicant to recover the above mentioned incentives from the users for the year 2016-17 as approved by the Hon’ble Commission.

(c) Pass such other order(s) as the Hon’ble Commission deems fit and appropriate in this case and in the interest of justice.”

4. The matter was heard on 25.5.2017 and notices were issued to the respondents to file their replies. No reply has been filed by the respondents despite notice. Vide Record of the Proceedings for the hearing dated 5.4.2018, the Petitioner was directed to file the following information:

(a) Whether the Petitioners have informed the Commission about each incident of grid disturbance as required under Appendix VI of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015;

(b) With regard to Voltage Deviation Index (VDI), submit the details of No. of hours the voltage at all sub-Stations of 400 kV and above was out of range in a month;

(c) With regard to Frequency Deviation Index (FDI), submit the details of No. of hours during which frequency was out of range in a month;

(d) Submit the following with regard to System Reliability: (i) % of times N-1 criteria was violated in the inter-regional corridors. (ii) % of times ATC violated on inter-regional corridors. (iii) % of time Angular difference on important buses was beyond permissible limit.

5. The Petitioner vide affidavit dated 7.5.2018 has submitted information called for which has been dealt in succeeding paras of this order.





6. The present petition has been filed under Regulations 6 and 29 of the Fees and Charges Regulations for approval of Performance Linked Incentive for the financial year 2016-17. Regulations 6 and 29 are extracted as under:

“6. Application for determination of fees and charges:

(1) The RLDCs and NLDC shall make application in the formats annexed as Appendix I to these regulations within 180 days from the date of notification of these Regulations, for determination of fees and charges for the control period, based on capital expenditure incurred and duly certified by the auditor as on 1.4.2014 and projected to be incurred during the control period based on the CAPEX and the REPEX.

(2) The application shall contain particulars such as source of funds, equipments proposed to be replaced, details of assets written off, and details of assets to be capitalized etc.

(3) Before making the application, the concerned RLDC or NLDC, as the case may be, shall serve a copy of the application on the users and submit proof of service along with the application. The concerned RLDC or NLDC shall also keep the complete application posted on its website till the disposal of its petition.

(4) The concerned RLDC or NLDC, as the case may be, shall within 7 days after making the application, publish a notice of the application in at least two daily newspapers, one in English language and one in Indian modern language, having circulation in each of the States or Union Territories where the users are situated, in the same language as of the daily newspaper in which the notice of the application is published, in the formats given in Appendix II to these regulations.

(5) The concerned RLDC or NLDC, as the case may be, shall be allowed the fees and charges by the Commission based on the capital expenditure incurred as on 1.4.2014 and projected to be incurred during control period on the basis of CAPEX and REPEX duly certified by the auditor in accordance with these Regulations:

Provided that the application shall contain details of underlying assumptions and justification for the capital expenditure incurred and the expenditure proposed to be incurred in accordance with the CAPEX and REPEX.

(6) If the application is inadequate in any respect as required under Appendix-I of these regulations, the application shall be returned to the concerned RLDC or NLDC for resubmission of the petition within one month after rectifying the deficiencies as may be pointed out by the staff of the Commission.

(7) If the information furnished in the petition is in accordance with the regulations and is adequate for carrying out prudence check of the claims made the Commission shall consider the suggestions and objections, if any, received from the respondents and any other person including the consumers or consumer associations. The Commission shall issue order determining the fees and charges order after hearing the petitioner, the respondents and any other person permitted by the Commission.



(8) During pendency of the application, the applicant shall continue to bill the users on the basis of fees and charges approved by the Commission during previous control period and applicable as on 31.3.2014, for the period starting from 1.4.2014 till approval of the Fees and Charges by the Commission, in accordance with these Regulations.

(9) After expiry of the control period, the applicant shall continue to bill the users on the basis of fees and charges approved by the Commission and applicable as on 31.3.2019 for the period starting from 1.4.2019 till approval of fees and charges under the applicable regulations.”

“29. Performance linked incentive to RLDCs and NLDC:

(1) Recovery of incentive by the Regional Load Despatch Centre shall be based on the achievement of the Key Performance Indicators as specified in Appendix V or such other parameters as may be prescribed by the Commission.

(2) Each Regional Load Despatch Centre shall submit its actual performance against each of the key performance indicators to the Commission on annual basis as per the format specified in Appendix V.

(3) NLDC shall submit the details in regards to each Key Performance Indicator in the format specified in Appendix V along with the methodology for approval of the Commission.

(4) The Commission shall evaluate the overall performance of the RLDCs or NLDC, as the case may be, on the basis of weightage specified in Appendix V. The Commission, if required, may seek advice of the Central Electricity Authority for evaluation of the performance of system operator.

(5) The RLDCs or NLDC, as the case may be, shall be allowed to recover incentive of 7% of annual charges for aggregate performance level of 85% for three years commencing from 1.4.2014 and for aggregate performance level of 90% from 1.4.2017. The incentive shall increase by 1% of annual charges for every 5% increase of performance level above 90%:

Provided that incentive shall be reduced by 1% of annual charges on prorata basis for the every 3% decrease in performance level below 85%.

(6) The RLDCs or NLDC, as the case may be, shall compute the Key Performance Indicators on annual basis for the previous year ending on 31st March and submit to the Commission along with petitions for approval of the Commission as per Appendix V and Appendix VI of these Regulations:

Provided that the key performance indicators of previous year ending on 31<sup>st</sup> March shall be considered to recover incentive on each year and shall be trued up at the end of the control period.”



7. The Petitioner has submitted that the Commission has notified the various performance indicators and their weightage for determination of fees and charges in the Fees and Charges Regulations and performance on these KPIs has been quantified to make it measurable. The Petitioner has submitted KPI-wise details which have been dealt with in the succeeding paragraphs:

**A. Reporting of Inter-connection meter error (Parameter 1)**

8. The meter readings are processed on weekly basis and an error could only be detected after processing the same and after going through the validation process. ERLDC is reporting the meter errors on weekly basis which are made available on website as per the recommendations specified in the Regulations. Therefore, the possible number of reports in a year is 52 which have been converted to percentage based on the actual reporting. Percentage performance has been proportionately converted to make scored.

9. The total weightage given for this parameter is 10. The Petitioner has submitted performance-wise details as under:

Performance during financial year 2016-17 (In Percentage) A*	100
Marks scored (In proportion of the percentage performance above)	10
*Formula for performance calculation	(No. of weekly reports issued /52 (Total no. of Weeks))*100

10. The Petitioner has submitted that as per Regulation 2.3.2 of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (hereinafter referred to as 'Grid Code'), RLDCs are responsible for meter data processing. Accordingly, problems regarding meters including those installed at inter-



regional/inter-national tie points are reported by concerned RLDCs to the utilities for corrective action. The Petitioner has submitted that as per Regulation 6.4.22 of the Grid Code, computations on metering data are to be made available to the regional entities for checking/verifications for a period of 15 days. Accordingly, the data on inter-connection meter error is made available in Public Domain on regular basis for checking/verifications of regional entities. The Petitioner has submitted that information regarding inter-connection meter error is published on ERLDC, i.e <http://erldc.in/market-operation/metering-error/org/Commercial/ER/>. The Petitioner has submitted that the discrepancy reports are discussed in detail in the different forum at RPC level.

11. We have considered the submission of the Petitioner. Since, the Petitioner has complied with the provisions of the Regulation 6.4.22 of the Grid Code, the claims of the Petitioner for weightage factor for reporting of inter-connection meter error is allowed for the purpose of incentive.

#### **B. Reporting of grid incidents and grid disturbances (Parameter 2)**

12. The Petitioner has submitted that the grid incidents and grid disturbances are compiled with on monthly basis and the same is forwarded to NLDC for further compilation on National basis for further reporting to the Commission on consolidated basis. As the reporting on grid incidences and grid disturbances is generated on monthly basis, target reports to be generated have been considered to be 12. The Petitioner has submitted that percentage performance has been measured based on the actual number of reports generated, which has been proportionately converted to marks scored.



13. The Petitioner has submitted that as against the total weightage of 10 for parameter reporting of grid incidents and grid disturbance, actual incidents of such events during the financial year 2016-17 are as under:

<b>Grid Incidents and Grid Disturbance for Financial Year 2016-17</b>			
Category	Count (Nos)	Recovery period (Hrs)	Loss of Energy (MUs)
GI-1	3	6:32:00	0.00
GI-2	12	12:50:00	0.00
GD-1	64	46:34:00	4.19
GD-2	0	0:00:00	0.00
GD-3	0	0:00:00	0.00
GD-4	0	0:00:00	0.00
GD-5	0	0:00:00	0.00
<b>All</b>	<b>79</b>	<b>17:56:00</b>	<b>4.19</b>

14. Vide Records of Proceedings for the hearing dated 5.7.2018, the Petitioner was directed to clarify whether it has informed the Commission about each incident of grid disturbance as required under Appendix VI of the Fees and Charges Regulations. The Petitioner vide its affidavit dated 7.5.2018 has submitted the incidences of grid incidents/ disturbances are being reported by the RLDCs to NLDC on a monthly basis which are thereafter compiled and are independently verified by National Load Despatch Center and reported to the Commission on a monthly basis as a part of Monthly Operational Report issued by National Load Despatch Center in accordance with Grid Code. The Petitioner has submitted that copy of the report is made available on public domain on POSOCO website i.e <https://posoco.in/reports/monthly-reports/>. The Petitioner has submitted the details of the report for the financial year 2016-17 as under:

S. No.	Month	Date of Reporting
1	April 2016	23 <sup>rd</sup> May 2016
2	May 2016	23 <sup>rd</sup> June 2016



3	June 2016	22 <sup>nd</sup> July 2016
4	July 2016	22 <sup>nd</sup> August 2016
5	August 2016	23 <sup>rd</sup> September 2016
6	September 2016	21 <sup>st</sup> October 2016
7	October 2016	23 <sup>rd</sup> November 2016
8	November 2016	23 <sup>rd</sup> December 2016
9	December 2016	23 <sup>rd</sup> January 2017
10	January 2017	23 <sup>rd</sup> February 2017
11	February 2017	23 <sup>rd</sup> March 2017
12	March 2017	21 <sup>st</sup> April 2017

15. The Petitioner has submitted performance-wise details as under:

Performance during financial year 2016-17 (In percentage) *	100
Marks scored (In proportion of the percentage performance above)	10
<b>*Formula for performance calculation :</b>	(No. of monthly reports issued /12 ) *100

16. The Petitioner has submitted that the incidences of grid disturbance/ incidences are being reported by the Regional Load Despatch Centers to the National Load Despatch Centre on a monthly basis which are thereafter compiled and are independently verified by National Load Despatch Centre and reported to the Commission on a monthly basis as a part of monthly operational report issued by National Load Despatch Centre in accordance with the provisions of the Grid Code.

17. We have considered the submission of the Petitioner. Perusal of the above submission reveals that the Petitioner is reporting incident of grid disturbance each month to the Commission. As per our direction, the Petitioner has placed on record the details of reporting. Accordingly, the claims of the Petitioner for weightage factor for reporting of grid incidents and grid disturbance is allowed for the purpose of incentive.



### **C. Average processing time of shut down request (Parameter 3)**

18. The Petitioner has submitted that the shutdown process is uniform across all the RLDCs and has been discussed and approved at RPC level. Time allowed to NLDC for approval of the shut-down requests is 26 Hours and RLDCs is 50 Hours (including NLDC Time). This methodology has been devised considering primarily the planned outages approved in the monthly OCC meetings of RPCs which are processed by RLDCs on D-3 basis (3-day ahead of actual day of outage) based on confirmation from the shutdown requesting agency and the then prevailing grid conditions. The Petitioner has submitted that RLDCs after processing the shut down requests at regional level forward the list to NLDC for impact assessment at national level and after clearance from NLDC, the final list of cleared shut down requests is intimated by respective RLDCs to the requesting agencies on D-1 (i.e. one day ahead of the proposed date of outage). As per the formula used for calculating KPI score for this parameter, performance will be considered 100%, if the time taken for processing shut down requests is less than the prescribed time i.e. 26 Hours for NLDC and 50 Hours for RLDCs. If the time taken is more than the prescribed time, then the performance will come down in the same proportion e.g. if the time taken in processing the request is more than 5% of the prescribed time then the percentage performance will be 95%. Percentage performance has been proportionately converted to marks scored.

19. The total weightage for the parameter average processing time of shut down request is 10. The Petitioner has submitted average processing time of shut down request during the financial year 2016-17 as under:



S.No.	Month	Total No of shutdown request in a month (B)	Total time (hrs) taken to approve the shutdown in a month(A)	Total time(hrs) taken to approve the shutdown in a month/Total No of shutdown requests in a month(C=A/B)
1	April 16	54	1444.58	26.75
2	May 16	62	1294.38	20.88
3	June 16	57	1300.76	22.82
4	July 16	41	856.37	20.89
5	August 16	60	1055.88	17.60
6	September16	85	1502.85	17.68
7	October 16	135	2352.03	17.42
8	Noverember16	172	2156.53	12.54
9	December 16	215	2445.62	11.37
10	January 17	173	5163.04	29.84
11	February 17	97	1663.01	17.14
12	March17	165	1448.29	8.78
	<b>Total</b>	<b>1316</b>	<b>22683</b>	<b>17.24</b>

20. The Petitioner has further submitted that the total time allowed to NLDC and RLDC for approval of the shutdown requests are 26 hours and 50 (Including NLDC Time) Hours respectively.

#### For ERLDC

Performance during financial year 2016-17(In percentage)	100
Marks scored (In proportion of the percentage performance above)	10
*Formula for performance calculation	$IF((A-B*50)>0,(1-(A-B*50)/(B*50))*100,100)$

21. The Petitioner has submitted that the procedure to streamline the process of transmission outage coordination between SLDCs, RLDCs, NLDC, RPCs and Indenting Agencies was developed by NLDC in 2015 and approved in OCC fora. As per the approved process, RLDC approves the shutdown requests of inter-State transmission lines and NLDC approves the shut down requests for inter-regional and all 765 KV



transmission lines. Therefore, RLDC consults NLDC for approval of outage requests.

Relevant portion of 87<sup>th</sup> OCC minutes is as under:

“7.1. Request for outages which are approved by OCC must be sent by the indenting agency of the transmission asset at least 3 days in advance to respective RLDC by 1000 hours as per Format II.(For example, if an outage is to be availed on say 10<sup>th</sup> of the month, the indenting agency would forward such requests to the concerned RLDC on 7<sup>th</sup> of the month by 1000 hours.)

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It was decided that all utilities will submit their Shutdown programme by 5<sup>th</sup> day of the month and ERLDC will compile and upload in ERLDC website on 8<sup>th</sup> day of the month. Beyond this no further requisition will be entertained unless there is emergency. Further, after approval of shutdown programme in the OCC the utility taking shutdown must intimate three (3) days in advance to ERLDC before taking the shutdown in real time.”

22. The Petitioner has submitted that as per the above procedure, total time allowed for approval of the shutdown requests to RLDCs including NLDC is 50 hours (1000 hrs of D-3 to 1200 hrs of D-1). Out of these 50 hours, time allowed to NLDC is 26 hours (1000 hrs of D-2 to 1200 hrs of D-1).

23. We have considered the submission of the Petitioner. As per Appendix VI of the Fees and Charges Regulations, weightage for average processing time of shut down request is considered as 10 out of 10.

#### **D. Availability of SCADA (Parameter 4)**

24. The Petitioner has submitted that SCADA system at ERLDC acquires real time data from Remote Terminal Unit (RTU) /Sub-station Automation System (SAS) for Central Sector Stations and IPP stations installed in respective region by using ULD communication network (whenever it is not available, PGCIL's own communication network is being used) and real time data from the various SLDCs of Region is fetched



through ICCP protocol by using dedicated communication links provided by PGCIL ULDC with redundancy and communication network under Powertel department of PGCIL. The Petitioner has submitted that all critical systems are configured and operational in hot-standby mode so as to ensure availability of the corresponding system in case of any contingency. The Petitioner has submitted that it has a backup control centre at different locations and real-time data is updated simultaneously from source. In case, data at main control centre is not available, then back-up control centre is utilized to visualize the real-time data. Due to different level of hierarchy of back-ups it leads to minimum downtime of the system. The Petitioner has submitted that as these systems are under comprehensive maintenance with the OEM, records of all the incidences are maintained which also has financial implication to the AMC corridor and records for KPI are made in the accordance with it.

25. The total weightage for this parameter is 10. The Petitioner has submitted percentage availability of SCADA for the months (from April 2016 to March 2017) as 100%. The marks claimed by the Petitioner are as under:

Performance during financial year 2016-17*	<b>100</b>
Marks scored (In proportion of the percentage performance above)	<b>10</b>
* Average of 12 months	

26. We have considered the submission of the Petitioner. We have worked out the average of 12 months as  $(100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100) / 12 = 100$ . Accordingly, the marks scored for availability of SCADA has been allowed as 10 out of 10.



### E. Voltage Deviation Index (Parameter 5)

27. The total weightage for the parameter Voltage Deviation Index (VDI) is 10. The Petitioner has submitted the details of VDI as under:

Name of the Region: Eastern Region				
S. No.	Name of the 400/765 kV SS	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not
1	Ranchi New	Yes	Yes	Yes
2	Jamshedpur	Yes	Yes	Yes
3	Muzaffarpur	Yes	Yes	Yes
4	Bihar Sariff	Yes	Yes	Yes
5	Binaguri	Yes	Yes	Yes
6	Jeerat	Yes	Yes	Yes
7	Rourkela	Yes	Yes	Yes
8	Jeypore	Yes	Yes	Yes
9	Maithaon	Yes	Yes	Yes

28. Vide Record of Proceedings for the hearing dated 5.7.2018, the Petitioner was directed to submit the details of No. of hours the voltage at all sub-stations of 400 kV and above and clarify whether these were out of range in a month. The Petitioner vide its affidavit dated 7.5.2018 has submitted that number of hours, the voltage remained out of the range stipulated in the Grid Code for all 12 months in the financial year 2016-17 (April 2016 to March 2017). The Petitioner has submitted that in compliance to the KPI-5 w.r.t the Appendix-VI of the Fees and Charges Regulations, ERLDC uploads the information regarding VDI on its website on daily, weekly and monthly basis as a part of



its daily, weekly and monthly reports. The Petitioner has submitted the relevant web links as under:

<b>KPI-5 (VDI)</b>	<b>Web Link on SRLDC website</b>
Daily VDI	<a href="http://www.erldc.org/DailyReport.aspx">http://www.erldc.org/DailyReport.aspx</a>
Weekly VDI	<a href="http://www.erldc.org/WeeklyReport.aspx">http://www.erldc.org/WeeklyReport.aspx</a>
Monthly VDI	<a href="http://www.erldc.org/MonthlyReport.aspx">http://www.erldc.org/MonthlyReport.aspx</a>

29. According to the Petitioner, VDIs of important sub-stations are being calculated and reported on daily basis and is also being hosted on websites by RLDCs which is thereafter compiled at NLDC and circulated internally. Similarly, RLDCs are also calculating and reporting VDI on their websites as part of weekly reports. The Petitioner has further submitted that NLDC independently calculates and reports VDIs of important sub-station on a monthly basis which is available on website as part of monthly report.

30. The Petitioner has submitted that persistent problems of low/high voltage are identified in the quarterly operational feedback submitted to CTU and CEA.

Performance during financial year 2016-17*	<b>100</b>
Marks scored (In proportion of the percentage performance above)	<b>10</b>
* Formula for performance calculation	$\frac{(((\text{No. of daily reports issued (to be derived from column C/365}(\text{Total no. of days in financial year -2016-17})) * 100) + (\text{No. of weekly reports issued (to be derived from column D)/ 52 (Total no. of weeks in financial year 2016-17)) * 100) + (\text{No. of monthly reports issued (to be derived from column E/12) * 100})}{3}}$

31. The Petitioner has submitted that Clause 3.5.1 and 3.5.2 of the ERLDC Operating Procedure, 2017 provides the corrective actions to be taken in the event of



voltage going high and low. The relevant extract of the Clause 1.5.1 of the ELRDC Operating Procedure, 2017 is extracted as under:

“1.5.1: In the event of high voltage (e.g. 400 kV voltage going beyond 415 kV and having a rising trend) following specific steps would be taken by the respective grid substation/generating station at their own, with intimation to ERLDC, unless specifically mentioned by ERLDC/SLDCs. Before taking any voltage control action the reason for high voltage as observed/reported be carefully studied. The network adjoining to the substation/s experiencing high voltage be also carefully studied and areas/substations/generating stations be identified where voltage control measures need to be taken in the following order of priority

- a) The switchable line/tertiary reactor are taken in (a list of Bus reactors/line reactors and tertiary reactors available at ER grid is enclosed at Annexure (VII)).
- b) The Generating units on bar at the stations in proximity to high voltage areas, absorb reactive power within the limits of their capability curves.
- c) Optimization of the filter banks at HVDC terminal (provided high voltage is being experienced in the vicinity of the terminal)
- d) Check the possibility of changing the transformer Tap if on eside of ICT is witnessing High voltage while other side is having low voltage.
- e) Checking possibility of rerouting/change of power flow on HVDC terminals so that loading on parallel EHV network can be altered that may result in reduction in voltage.
- f) ERLDC/SLDC shall consider opening one circuit of lightly loaded multi circuit lines around the area/substation where high voltage is reported, ensuring security of the balance network. In case it becomes essential to switch out one of the circuits of inter-regional lines to mitigate high voltage at one or more inter-regional sub-stations, due consent would be obtained from the concerned neighbouring RLDC(s) and NLDC.

#### 1.5.2 Low Voltage Condition

In the event of low voltage (e.g. 400 kV voltage going below 390 kV and have a declining trend), following specific steps would be taken by the respective grid substation/generating station at their own, with intimation to ERLDC, unless specifically mentioned otherwise by ERLDC/SLDCs. However, before taking any voltage control action, the reason for low voltage as observed/reported is to be carefully studied. The network adjoining the substation/s experiencing low voltage to be also carefully studied and areas/substations/generating stations to be identified where voltage control measures need to be taken in the following order of priority.

- a) Close the lines which were opened to control high voltage after obtaining due permission from ERLDC/SLDCs.
- b) The bus reactor be switched out.



- c) The switchable line/tertiary reactor be taken out.
- d) All generating units on bar shall generate reactive power upto the limits of their respective capability curves.
- e) Optimization of the filter banks at HVDC terminal.
- f) Check the possibility of changing the transformer Tap if one side of ICT is witnessing Low voltage while other side is having High voltage.
- g) Operate hydro generator for VAR generation i.e. at lagging p.f
- h) Check possibility of altering HVDC power flow settings on HVDC terminals so that loading on parallel EHV network goes down resulting in rise in voltage.

32. The Petitioner has submitted that corrective actions are being taken in Real Time Grid Conditions by ERLDC at 400 kV, 765 kV and Inter-State level by opening /closing shunt reactors, transmission lines, etc. The Petitioner has submitted that for voltage deviations taking place in/resulting from intra-State system, ERLDC write regularly to the constituents and also discuss in the OCC meetings. The Petitioner has placed on the record the extracts from OCC meeting of ERPC, sample letters from RLDC stating sustained voltage deviation and suggested corrective actions. The Petitioner has submitted that apart from these, persistent high voltage and low voltage are being reported in the NLDC operational feedback every quarter.

33. We have considered the submission of the Petitioner. As per Regulation 29 (6) of the Fees and Charges Regulations, RLDCs or NLDC are required to compute the Key Performance Indicators on annual basis for the previous year ending on 31st March and are required to submit the same to the Commission for approval. The Petitioner has



computed the Key Performance Indicators on annual basis. As per Appendix VI of the Fees and Charges Regulations, the weightage for VDI is considered as 10 out of 10.

#### **F. Frequency Deviation Index (Parameter 6)**

34. The Petitioner has submitted that Frequency Deviation Index (FDI) is calculated as the percentage of time the frequency is outside the Grid Code band. The total weightage for the parameter Frequency Deviation Index (FDI) is 10. The Petitioner has submitted month-wise details of FDI during 2016-17 and intimated to utilities through daily, weekly and monthly reports for corrective action.

35. The Petitioner vide Record of Proceeding for the hearing dated 5.7.2018 was directed to submit the details of number of hours the frequency remained out of range in a month. The Petitioner vide its affidavit dated 7.5.2018 has submitted the details of number of hours the frequency remained out of the range stipulated in the Grid Code for all 12 months in the financial year 2016-17 (April 2016 to March 2017). The Petitioner has submitted that in compliance to the KPI-6 w.r.t the Appendix-VI of the Fees and Charges Regulations, ERLDC uploads the information regarding FDI on its website on daily, weekly and monthly basis as a part of its daily, weekly and monthly reports for which the relevant web links are as under:

<b>KPI-6 (FDI)</b>	<b>Web Link on SRLDC website</b>
Daily FDI	<a href="http://www.erldc.org/DailyReport.aspx">http://www.erldc.org/DailyReport.aspx</a>
Weekly FDI	<a href="http://www.erldc.org/WeeklyReport.aspx">http://www.erldc.org/WeeklyReport.aspx</a>
Monthly FDI	<a href="http://www.erldc.org/MonthlyReport.aspx">http://www.erldc.org/MonthlyReport.aspx</a>



36. The details of KPI-6 are as under:

Performance during financial year 2016-17*	<b>100</b>
Marks scored (In proportion of the percentage performance above)	<b>10</b>
*Formula for performance calculation	$\left[ \left( \frac{\text{No. of daily reports issued (to be derived from column C/365(Total no. of days in financial year 2016-17)) * 100}{\text{Total no. of days in financial year 2016-17}} \right) + \left( \frac{\text{No. of weekly reports issued (to be derived from column D)/ 52 (Total no. of weeks in financial year 2016-17)) * 100}{\text{Total no. of weeks in financial year 2016-17}} \right) + \left( \frac{\text{No. of monthly reports issued (to be derived from column E/12) * 100}{\text{Total no. of months in financial year 2016-17}} \right) \right] / 3$

37. We have considered the submission of the Petitioner. FDIs submitted by the Petitioner are found to be in order. Accordingly, in terms of Appendix VI of the Fees and Charges Regulations, weightage for FDI has been allowed as 10 out of 10.

### **G. Reporting of System Reliability (Parameter 7)**

38. The Petitioner has submitted that deviation indices are being reported on daily basis for the critical nodes along with weekly and monthly as per the Fees and Charges Regulations. The Petitioner has submitted that the possible number of reports which could be generated (365 for daily, 52 for weekly and 12 for monthly) has been converted to KPI scores based on the actual reporting.

39. The total weightage for this parameter Reporting of System Reliability (RSR) is 10.

The Petitioner has submitted the report of system reliability as under:

(a) Reporting of (N-1) violations (To be reported to CERC)

S.No.	Month	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not





A	B	C	D	E
1	Apr'16	Yes	Yes	Yes
2	May'16	Yes	Yes	Yes
3	June'16	Yes	Yes	Yes
4	July'16	Yes	Yes	Yes
5	Aug'16	Yes	Yes	Yes
6	Sep'16	Yes	Yes	Yes
7	Oct'16	Yes	Yes	Yes
8	Nov'16	Yes	Yes	Yes
9	Dec'16	Yes	Yes	Yes
10	Jan'17	Yes	Yes	Yes
11	Feb'17	Yes	Yes	Yes
12	Mar'17	Yes	Yes	Yes

X*	<b>100</b>
*Formula	$\frac{(((\text{No. of daily reports issued (to be derived from column C/365}(\text{Total no. of days in financial year 2016-17})) * 100) + (\text{No. of weekly reports issued (to be derived from column D) / 52}(\text{Total no. of weeks in financial year 2016-17})) * 100) + (\text{No. of monthly reports issued (to be derived from column E/12)} * 100))}{3}}$

(b) Reporting of ATC violations (To be reported to CERC)

S.No.	Month	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not
A	B	C	D	E
1	Apr'16	Yes	Yes	Yes
2	May'16	Yes	Yes	Yes
3	June'16	Yes	Yes	Yes
4	July'16	Yes	Yes	Yes
5	Aug'16	Yes	Yes	Yes
6	Sep'16	Yes	Yes	Yes
7	Oct'16	Yes	Yes	Yes
8	Nov'16	Yes	Yes	Yes
9	Dec'16	Yes	Yes	Yes
10	Jan'17	Yes	Yes	Yes
11	Feb'17	Yes	Yes	Yes
12	Mar'17	Yes	Yes	Yes
Y*	<b>100</b>			
*Formula	$\frac{(((\text{No. of daily reports issued (to be derived from column C/365}(\text{Total no. of days in$			



	financial year 2016-17))*100)+(No. of weekly reports issued(to be derived from column D) /52 (Total no. of weeks in financial year 2016-17))*100)+( No. of monthly reports issued (to be derived from column E/12)*100))/3
--	--

(c) Reporting of Angle difference between important buses (To be reported to CERC)

S.No.	Month	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not
A	B	C	D	E
1	Apr'16	Yes	Yes	Yes
2	May'16	Yes	Yes	Yes
3	June'16	Yes	Yes	Yes
4	July'16	Yes	Yes	Yes
5	Aug'16	Yes	Yes	Yes
6	Sep'16	Yes	Yes	Yes
7	Oct'16	Yes	Yes	Yes
8	Nov'16	Yes	Yes	Yes
9	Dec'16	Yes	Yes	Yes
10	Jan'17	Yes	Yes	Yes
11	Feb'17	Yes	Yes	Yes
12	Mar'17	Yes	Yes	Yes

Z*	<b>100</b>
*Formula	(( No. of daily reports issued (to be derived from column C/365(Total no. of days in financial year 2016-17))*100)+(No. of weekly reports issued(to be derived from column D) 52 (Total no. of weeks in financial year 2015-16))*100)+( No. of monthly reports issued (to be derived from column E/12)*100))/3

Performance during financial year 2016-17*= Marks scored (In proportion of the percentage performance above)	<b>100</b> <b>10</b>
*Formula	<b>(X+Y+Z)/3</b>

40. The Petitioner vide Record of Proceedings for the hearing dated 5.7.2018 was directed to submit the information with regard to System Reliability, namely (a) Whether



percentage of times N-1 criteria was violated in the inter-regional corridors, (b) Percentage of times ATC violated on inter-regional corridors, and (c) Percentage of time Angular difference on important buses was beyond permissible limit. The Petitioner vide its affidavit dated 7.5.2018 has submitted as under:

(i) With regard to (a) above, the Petitioner has submitted that violation of percentage of times N-1 criteria in the inter-regional corridors is being reported by ERLDC on daily weekly and monthly basis on the following web links:

<b>KPI-7</b>	<b>Web Link on SRLDC website</b>
Daily	<a href="http://www.erldc.org/DailyReport.aspx">http://www.erldc.org/DailyReport.aspx</a>
Weekly	<a href="http://www.erldc.org/WeeklyReport.aspx">http://www.erldc.org/WeeklyReport.aspx</a>
Monthly	<a href="http://www.erldc.org/MonthlyReport.aspx">http://www.erldc.org/MonthlyReport.aspx</a>

The Petitioner has placed on record the Reports of 12 months (April 2016 to March 2017) indicating N-1 criteria violations.

(ii) With regard to (b) above, the Petitioner has submitted that violation of percentage of times ATC (i.e. Available Transfer Capability) in the inter-regional corridors is being reported by ERLDC on daily weekly and monthly basis on the following web links:

<b>KPI-7</b>	<b>Web Link on SRLDC website</b>
Daily	<a href="http://www.erldc.org/DailyReport.aspx">http://www.erldc.org/DailyReport.aspx</a>
Weekly	<a href="http://www.erldc.org/WeeklyReport.aspx">http://www.erldc.org/WeeklyReport.aspx</a>
Monthly	<a href="http://www.erldc.org/MonthlyReport.aspx">http://www.erldc.org/MonthlyReport.aspx</a>

(iii) With regard to (c) above, the Petitioner has submitted that the percentage of times the angular difference on important buses was beyond the permissible limits and the same is being reported by ERLDC on daily, weekly and monthly basis on



the following web links:

<b>KPI-7</b>	<b>Web Link on SRLDC website</b>
Daily	<a href="http://www.erldc.org/DailyReport.aspx">http://www.erldc.org/DailyReport.aspx</a>
Weekly	<a href="http://www.erldc.org/WeeklyReport.aspx">http://www.erldc.org/WeeklyReport.aspx</a>
Monthly	<a href="http://www.erldc.org/MonthlyReport.aspx">http://www.erldc.org/MonthlyReport.aspx</a>

The Petitioner has placed on record the monthly reports (April 2016 to March 2017) on Angular difference between important buses.

41. The Petitioner has submitted that the score for KPI No.7 (Reporting of System Reliability) is 10 out of 10.

42. We have considered the submission of the Petitioner. Reporting of System Reliability is being done by the Petitioner as per Appendix VI of the Fees and Charges Regulations. Accordingly, weightage claimed for reporting system reliability is allowed as 10 out of 10.

#### **H. Availability of website (Parameter 8)**

43. The Petitioner has submitted that different type of network monitoring tools namely spiceworks, trend micro anti-APT deep discovery, etc. are being deployed at different control centre to capture the outages of websites. This network management software generates the comprehensive reports. Similarly, with the IPS service provider's user interface, user can see the availability of the ISP links which is commercially linked also.

44. The total weightage for the parameter "availability of website" is 10. The percentage of availability of website was 100 for all months except September, 2016,



December, 2016 and March, 2017. The availability for the months of September, 2016, December, 2016 and March, 2017 was 99.93%, 99.99% and 99.99% respectively. The details of marks claimed by the Petitioner are as under:

Performance during financial year 2016-17*	<b>99.99</b>
Marks scored (In proportion of the percentage performance above)	<b>9.99</b>
* Average of 12 months	

45. We have considered the submission of the Petitioner. The Petitioner is reporting availability of website as per Appendix VI of the Fees and Charges Regulations. Accordingly, the weightage claimed for availability of website is allowed as 9.99 out of 10.

#### **I. Availability of Standby power supply (Parameter 9)**

46. The total weightage for the parameter “availability of standby power supply” is 5. The Petitioner has submitted availability of standby power supply as under:

Performance during financial year 2016-17*	<b>100</b>
Marks scored (In proportion of the percentage performance above)	<b>5</b>
* Average of 12 months	

47. The Petitioner has submitted that powers to all the critical infrastructures are supplied through redundant UPS system and battery system. Inputs to these UPS are being supplied either through incoming feeders or DG sets (in case of failure of main inputs) These auxiliary systems are also under AMC and are being checked/tested on regular basis. The Petitioner has submitted that trial runs are carried out on weekly



basis to check the DG set availability and daily records are being maintained at each of the locations.

48. We have considered the submission of the Petitioner. The Petitioner has claimed availability of standby power supply as per Appendix VI of the Fees and Charges Regulations. Accordingly, weightage claimed for availability of Standby power supply is considered as 5 out of 5.

**J. Variance of Capital expenditure (Parameter 10)**

49. The total weightage for the parameter “Variance of capital expenditure” is 5. The Petitioner has submitted the details of Variance of Capital Expenditure as under:

(Rs.in lakh)

Capital Expenditure allowed by CERC (A)	Actual Expenditure incurred (B)	% Variation C= ABS(A-B)/A*100
339.01	66.32	80.44

50. The Petitioner has submitted that the amount considered in the column A above is as per the Fees and Charges Regulations for the control period 2014-19. The Petitioner has submitted that in Column B, value as per balance sheet for the year 2016-17 has been considered.

Performance during financial year 2016-17*	<b>76.52</b>
<b>*Formula</b>	<b>IF(C&gt;10,100-(C-10)/3,100)#</b>
Marks Scored (in proportion of the percentage performance above)	<b>3.83</b>
*Average of 12 months	
# Up to 10% variation, performance is proposed to be considered 100% and for any additional 3% variation beyond initial 10%, performance shall be decrease by 1% in line with the methodology of the incentive calculation prescribed in Regulation 29(5) of the Fees and Charges Regulations.	



51. The Petitioner has submitted that figures indicating in the petition has been considered as targets and the figure as per the balance sheet have been considered as actual performance. The Petitioner has submitted that limit of upto 10% variation has been considered for claiming 100% performance and for any additional 3% variation beyond initial 10%, performance shall decrease by 1% in line with the methodology of the incentive calculation prescribed in the Regulation 29(5) of the Fees and Charges Regulations. The Petitioner has submitted that percentage performance has been proportionately converted to marks scored.

52. We have considered the submission of the Petitioner. The weightage claimed for variance of capital expenditure is provisionally considered as 3.83 out of 5 in terms of Appendix VI of the Fees and Charges Regulations.

#### **K. Variance of Non-Capital expenditure (Parameter 11)**

53. The total weightage for the parameter “variance of non-capital expenditure” is 5. The Petitioner has submitted the details of variance of non-capital expenditure as under:

(Rs.in lakh)

Non-capital expenditure allowed by CERC (A)	Actual expenditure incurred (B)	% Variation $C = \text{ABS}(A-B)/A * 100$
2225.38	2372.86	6.63
In the Non-capital expenditure, HR Expenses, O&M Expenses and Depreciation have been considered. In column A, figures as per the petition filed before the Commission for the control period 2014-19 have been considered. In column B, value as per Balance sheet for the financial year 2016-17 has been considered.		

Performance during financial year 2016-17*	<b>100</b>
<b>*Formula</b>	<b><math>\text{IF}(C &gt; 10, 100 - (C - 10)/3, 100)\#</math></b>
Marks Scored (in proportion of the %age performance above)	5
*Average of 12 months	
# Up to 10% variation, performance is proposed to be considered 100% and for	



any additional 3% variation beyond initial 10%, performance shall be decrease by 1% in line with the methodology of the incentive calculation prescribed in Reregulation 29(5) of the Fees and Charges Regulations.

54. We have considered the submission of the Petitioner. Based on the percentage variation, the weightage claimed for variance of non-capital expenditure is allowed as 5 out of 5 in terms of Appendix VI of the Fees and Charges Regulations.

**L. Percentage of certified employees (Parameter 12):**

55. The Petitioner has submitted that the pursuant to recommendations of G.B. Pradhan Committee, a framework was developed for System Operators from the States and POSOCO for training and certification by certifying agency, i.e. NPTI. The Petitioner has submitted that framework provides for basic level, specialist level and management level courses and till date five basic level certifications and four specialist level certifications have been introduced. The Petitioner has submitted that the exams are conducted online on all India basis and certification is foundation level exam where all system operators in the country can appear, whereas specialist level exams focus on a particular area of expertise.

56. The total weightage for the parameter “variance of percentage of certified employees” is 5. The Petitioner has submitted the details of variance of percentage of certified employees as under:

No. of Employees for Certification as on 31.3.2015(A)	No. of Employees for Certification as on 31.3.2015(B)	%age of Employees Certified as on 31.3.2017 (C=B/A*100)
48	41	85.42

Performance during financial year **100**





2016-17*	
<b>*Formula</b>	<b>IF(C&lt;85,(100-(85-C)/3),100)#</b>
Marks Scored (in proportion of the percentage performance above)	5
*Average of 12 months	
# Up to 85% certification, performance is proposed to be considered 100% and for certification below 85%, performance shall decrease by 1% for every 3% decrease in the certification in line with the methodology of the incentive calculation prescribed in Regulation 29(5) of the Fees and Charges Regulations.	

57. As per methodology of the incentive specified in Regulation 29 (5) of the Fees and Charges Regulations, for certification upto 85%, performance would be considered 100% and for certification below 85%, performance would be decreased by 1% for every 3% decrease in the certification. Accordingly, the weightage for percentage of certified employees is considered as 5 out of 5 as per Appendix VI of the Fees and Charges Regulations.

58. We have considered the submissions of the Petitioner with regard to KPI. The following Key Performance Indicators are allowed as per the methodology specified in Appendix-V of the Fees and Charges Regulations:

S. No	Key Performance Indicators	Weight age	Petitioner claimed for financial year 2016-17	Allowed
1	Reporting of Interconnection meter error	10	10	10
2	Reporting of Grid Incidents and Grid Disturbance	10	10	10
3	Average processing time of shut down request	10	10	10
4	Availability of SCADA System	10	10	10
5	Voltage Deviation Index (VDI)	10	10	10
6	Frequency Deviation Index (FDI)	10	10	10



<b>7</b>	Reporting of System Reliability	<b>10</b>	10	10
<b>8</b>	Availability of Website	<b>10</b>	10	9.99
<b>9</b>	Availability of Standby Supply	<b>5</b>	5	5
<b>10</b>	Variance of Capital expenditure	<b>5</b>	3.83	3.83
<b>11</b>	Variance of Non Capital expenditure	<b>5</b>	5	5
<b>12</b>	Percentage of Certified Employee	<b>5</b>	5	5
	Total	100	98.83	98.82

59. As per the above table, the Petitioner has achieved 98.82% Key Performance Indicators out of 100%. Accordingly, the Petitioner is allowed to recover incentive of 8.764% of annual charges for the financial year 2016-17.

60. Petition No. 55/MP/2018 is disposed of with the above.

Sd/-  
**(Dr. M.K.Iyer)**  
Member

sd/-  
**(A. K. Singhal)**  
Member

sd/-  
**(P.K.Pujari)**  
Chairperson

